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USSR REPORT

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'HOUSING CONSTRUCTION ADVANCES IN CEMA COUNTRIES

Moscow AGITATOR in Russian No 19, 1979 pp 41-42

[Article by V. Podkolzin, expert from the CEMA Secretariat: "Housing Construction in the CEMA Countries"]

[Text] The countries that belong to the Council of Economic Mutual Assistance are successfully carrying out broad social programs to improve the well-being of their populations. An important part of these programs is allout development of housing construction.

Impressive changes have taken place in construction in the CEMA countries in recent decades. Many labor-intensive production procedures have been mechanized and numerous plants have been built to produce prefabricated design elements and construction parts. If we take basic construction machines, for example, only 5,090 excavators, 3,000 bull-dozers, and 5,600 mobile cranes were in use in the Soviet construction industry in 1950, but in 1978 USSR construction had 160,000 excavators, 167,000 bulldozers, and 200,000 mobile cranes. Similar changes have occurred in construction machinery in the other CEMA countries. Enterprises of the building materials industry have also been supplied with highly mechanized and automated equipment.

In the last two decades the production of output by the building materials industries in the CEMA countries has more than tripled.

Bilateral and multilateral economic and scientific-technical cooperation in the most diverse forms has been an important factor in these changes in the structure of construction work in the CEMA countries.

The most important forms of cooperation are specialization and collaboration in the production of primary construction machines. This makes it possible to maximize series production and attain a high technical level. Mutual deliveries of machinery and supplying one another with the most important types of output from the building materials industry are advantageous to every country. The first phase of the Kiyembayev asbestos mining and concentrating combine, which is being built through the combined efforts of the CEMA countries, will be launched this year.

This will allow the countries participating in the joint construction project to meet their need for this valuable building material to a significant degree.

The establishment of large home-building combines in the CEMA countries is playing a significant part in the advancement of housing construction. These combines are being set up primarily with the aid and technical assistance of the Soviet Union. The Soviet Union turned over one of these combines, with a projected capacity of 70,000 square meters of housing space a year, as a gift to the fraternal Mongolian people on the occasion of the 50th anniversary of the proclamation of the Mongolian People's Republic. Soviet home-building combines have taken part in the building of certain regions within cities in various CEMA countries.

The construction workers of the CEMA countries are constantly exchanging progressive work experience and scientific-technical advances. Everything best in the organization of the construction industry of each country becomes the property of builders in the other fraternal countries. This is socialist internationalism in action, uniting the socialist countries and helping them solve one of the principal economic problems: improving public well-being.

Certain CEMA countries have become world leaders in scale of housing construction. They are expanding construction and installation capacities, introducing new technologies for erecting buildings and structures, and improving the quality of design concepts and the technical level of production of building materials.

All this enables the socialist countries to make steady progress in satisfying public needs for well-appointed housing. The following fact is eloquent testimony to this: during the period of activity of the Council of Economic Mutual Assistance, which is celebrating its 30th anniversary this year, the CEMA countries have built more than 71 million apratments and turned them over for use. In other words, approximately two-thirds of the people in the CEMA countries have moved into new apartments and improved their housing conditions.

If we take individual CEMA countries, the following figures illustrate the broad development of housing construction in them: between 1956 and 1978 1,094,000 apartments were turned over for use in Bulgaria, 1,607,000 in Hungary, 2,172,000 in East Germany, 49,000 in Mongolia, 4,183,000 in Poland, 3,616,000 in Romania, 51,724,000 in the Soviet Union, and 2,189,000 in Czechoslovakia. In the years 1970-1978 130,000 apartments were built in the Republic of Cuba.

Along with growth in the volume of housing construction the quality of new buildings is improving. New apartments are becoming larger and better-appointed.

in the fraternal socialist countries 1978 was also noteworthy for advances in solving the housing problem. Last year the working people

of Bulgaria received 66,500 new apartments and individual homes and 88,000 were turned over for use in Hungary. In East Germany 167,800 apartments were built and modernized, while Cubans received 16,500 new apartments. Last year 2,125,000 new apartments and individual houses were turned over to new inhabitants in the USSR, which enabled almost 11 million people to improve their living conditions. The volume of housing construction last year was greater than in the previous year in all the countries of the socialist community.

The new housing regions of Sofia, Sudapest, Berlin, Havana, Ulan-Bator, Budapest, Warsaw, Moscow, Prague, and many, many other cities and communities in the socialist countries are models for world housing development practice with respect to architectural concepts and provision of municipal and sociocultural services.

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11,176 CSO: 1823

CEMA PRICE CONFERENCE MEETS IN YEREVAN

Yerevan KOMMUNIST in Russian 26 Sep 79 p 3

[Article from Armenpress (Armenian Press Agency): "CEMA at Work"]

[Text] The 12th session of the conference of leaders of departments on prices of the CEMA countries has opened in the capital of our republic. Participants in the session are the delegation of Bulgaria headed by I. Videnov, chief of the Main Administration on Prices and first deputy chairman of the Bulgarian State Planning Committee; the Hungarian delegation headed by P. Vallus, deputy chairman of the State Committee on Materials and Prices; the Vietnamese delegation headed by To Duy, chairman of the State Price Commission; the delegation of East Germany, headed by W. Halbritter, minister and head of the department of prices of the Council of Ministers; the Cuban delegation led by R. Hernandez, minister and chairman of the State Committee for Prices; the Mongolian delegation led by D. Byenbasuren, chairman of the State Committee on Prices and Standards; the Polish delegation headed by E. Grochal, chairman of the State Price Commission; the Romanian delegation led by N. Ionescu, deputy chairman of the State Committee on Prices; the USSR delegation led by N. Glushkov, head of the State Committee on Prices; the delegation of Czechoslovakia led by M. Sabolchik, minister and chairman of the federal department of prices.

Experts and representatives from the secretariat of the Council on Economic Mutual Assistance are also participating in the session.

First deputy chairman of the Council of Ministers of the Armenian SSR A. Kirakesyan welcomed the participants in the session on behalf of the government of the republic.

The results of this session, he said, will take the form not just of concrete resolutions to be passed on particular issues of price formation, but also in promoting the further unity of the CDM countries in the fields of scientific-technical and economic cooperation.

In the 30 years of CEMA operation, cooperation among its members in the planning field has come a long way, from simple coordination of mutual commodity deliveries to comprehensive forms and methods of joint planning of integration activities over the long run.

"I would like to express my confidence," A. Kirakosyan said in conclusion, "that, by choosing the ancient, but forever young city of Yerevan as the site of this session, you will not only have excellent opportunities for useful work, but will also become familiar with the achievements of Soviet Armenia."

Participants at the session have begun discussion of the question "Tasks of the Conference of Leaders of Departments of Prices of the CEMA Countries to Carry Out the Decrees of the 33rd Session and 91st Meeting of the Executive Committee of CEMA."

N. Glushkov, chairman of the USSR State Committee on Prices, spoke at the session.

In late June, he said, the 33rd session and 91st meeting of the Executive Committee of CEMA were held in Moscow. The session was an important event in the life of the countries of the socialist community. It summed up the result of 30 years of cooperation by the fraternal countries and outlined the challenges to further and refine this cooperation.

The session enthusiastically received a greeting from General Secretary of the CPSU Central Committee and Chairman of the Presidium of the USSR Supreme Soviet Comrade L. I. Brezhnev and the greetings of the leaders of the fraternal parties on the occasion of the 30th anniversary of CEMA.

These greetings and the statements by the heads of delegations gave a vivid picture of the enormous socioeconomic achievements of the socialist countries, their progress within the CEMA framework, the fundamental challenges of advancing and deepening this cooperation in the future, and its positive effect on world economic relations.

The decree of the 91st meeting of the Executive Committee, which was held immediately after the session, commissioned all CEMA bodies to develop the necessary steps to carry out the decrees adopted by the 33rd Session of the Council and begin implementation of them. Allow us here to stop and consider the basic practical challenges for our conference that follow from the resolutions adopted at the session.

One of the most important practical results of the session's work was the adoption of long-term target programs for cooperation in the production of industrial consumer goods. The first program aims at fuller satisfaction of the growing demand in our countries for high-quality consumer goods. Realization of this program will strengthen the material foundation for accomplishing the chief task of the economic policy of

both the USSR and the fraternal parties and states: improving the wellbeing of the working people.

The transportation program envisions major steps to carry on growing shipping among our countries. In this connection a study should be made of price stimulation for the broad introduction of progressive types of shipping.

There are important problems to be solved in stimulating the production and export of agricultural and food industry products, improving the efficiency of production and quality, stepping up scientific-technical progress, and saving material resources by every means.

The heads of the delegations of the fraternal socialist countries participated in discussion of this issue.

G. Ikilikyan, chief of the division of trade and planning and inancial agencies of the Central Committee of the Armenian Communist Party.

Armenian SSR Minister of Finance Dzh. Dzhanoyan, and chairman 4/ the Armenian SSR State Committee on Prices P. Arutyunyan participated in the meeting.

11,176 CSO:1823

FORMATION OF INCOME IN LOCAL BUDGETS IN CEMA COUNTRIES

Moscow FINANSY SSSR in Russian No 9, 1979 pp 63-69

[Article by D. D. Bumakov: "The Local Budgets of the CEMA Countries - Issues of Formation and Regulation"]

[Text] Local governmental agencies in the socialist countries are an important link in state management of economic and sociocultural advancement. They are the carriers of the policy of the communist and worker parties in the local areas and develop the creative initiative and activism of the people in the interests of economic advancement and improving the standard of living and culture. Local Soviets (councils) involve the masses of ordinary people in management of the state. The distinctive feature of their work is that they consider national and local interest in their activities. While carrying out national policy they are concerned for comprehensive development of their subordinate termitory, insuring full employment of the population, continued improvement in housing and domestic conditions, protection of the environment, and the like.

The Societs have fairly broad authority. They adopt plans for economic and social development of the corresponding oblast, rayon, city, or town, ratify the budget and take organizational steps to carry it out, and evaluate the report on execution of the budget. Hamy local economic and budget organizations are under their management. In relation to enterprises and organizations subordinate to central or republic authorities, local governmental agencies have coordinating authority and cooperate closely with them in their everyday activities.

The budget organization of the socialist countries is defined by the constitution, which gives governmental bodies the right to have their own budgets and manage their incomes and expenditures on the basis of the tasks of the national economic plan.

The same principles, democratic centralism, Leminist nationality policy, and the uniformity of the budget system, form the basis of the structure of local budgets and of the budget systems as a whole in all of the CEMA countries. The entire budget system is managed from a single center, but at the same time the Scriets are given sufficient scope to

show initiative in writing and executing their own budgets. Practical realization of the principle of uniformity of budget systems has made it possible to build a strong material and financial base for the activities of the Soviets and eliminate deficits in their budgets, which were characteristic for earlier forms of local self government. In addition, this has made it possible to satisfy the needs of the working people more fully.

Evidence of the important role of local budgets is seen in the fact that they account for a significant part of all state budget resources today (see Table 1 below).

Table 1. Share of Local Budget in State Budget of CEMA Countries

	L	1970 r.		(4) 1978 r. (Regul)		
Copum (a)	(b) d	2)	(3)	(1)	2	3)
Болгария (с)	ман. аевое мара. марок мара. заотых мара. аеез мара. крон	 1015.7 14.1 100.3 26.0 66.0	17.7 20.7 25.9 19.5 32.1	10 274.0 130.7 1 059.9 318.5 274.5	31.6 196.7 49.6	21.3 24.2 19.6 15.6 33.0

Key: (a) Countries;

(b) Units of currency;

(c) Bulgaria, millions of levs;

(d) East Germany, billions of marks;

(e) Poland, billions of zloty;

(f) Romania, billions of lei;

(g) Czechoslovakia, billions of koruny;

(1) State budget income;

(2) Volume of local budgets;

(3) Share of local budgets;

(4) 1978, according to plan.

The share of the local budget ranges from 16 to 33 percent of state budget income. The difference in percentages is explained by differences in the powers of local governmental agencies and the specific features and scale of the economic and sociocultural tasks being accomplished. A tendency to bolster the role of local budgets is characteristic of many countries. At the same time, there are countries where the share of local budgets in state budget income has dropped in the last eight years.

We must take note of two trends that affect the size of local budgets and their share of the state budget. On the one hand, the increase in expenditures for education, public health, and social security creates the prerequisites for enlarging the size of local budgets because, in the large majority of cases, these expenditures are made by local governmental agencies. The same trend is promoted by various other,

equally important factors such as the need for rapid development of housing construction, the service sphere, and the utilities network, organization of cultural and domestic services for the population on a higher level, and major expenditures for general face-lifting and environmental protection. In view of this whole set of problems the socialist countries devote constant attention to local governmental agencies and seeing that they have balanced budgets.

On the other hand, the process of concentration of production is continuing. The standard way to achieve greater production of output, a decrease in costs, and improvement in the quality of goods is by optimal consolidation of enterprises, joining smaller economic organizations together and shutting down unprofitable ones. The large sectorial associations being set up in the CEMA countries frequently encompass both republic and local industry. As a result, some of the small enterprises formerly under the management of local Soviets are being put in associations managed at the republic level. This narrows the economic base of local budgets. It is this process that has caused a certain decrease in the share of local budgets and national financial resources in certain countries.

The CEMA countries today have both two-level and three-level systems of local governmental agencies. The three-level system operates in East Germany and Czechoslovakia. They have oblast (called district in East Germany), regional, city, and rural people's councils (Soviets). With the two-level division used in Bulgaria, Hungary, Poland, and Romania the higher level is the district council and the lower level is the city or rural council.

The socialist states assign important political and socioeconomic functions to local governmental agencies and, at the same time, give them the material base necessary for this. A certain part of the capital is allocated in the form of assigned income, which is still called the local budget's "own" income. This comprises chiefly receipts from the local economy and from certain taxes and fees. In addition, deductions from national income are established or grants are appropriated from the central or republic budget to cover the growing expenditures of the local Soviets.

The composition of the assigned income of local budgets is fairly broad. It includes a whole list of payments by state enterprises and organizations under local jurisdiction, cooperative societies, and budget organizations, personal taxes established by central authorities, and local taxes and fees. The proportion of assigned income is quite large in some countries. In 1978 it was 42 percent in East Germany, 49.2 percent in Romania, and 37.1 percent in Czechoslovakia; in Poland, counting deductions made depending on the volume of retail trades, it was 70 percent.

An analysis of the sources shows that in most countries the high percentage of councils' own income is attained chiefly by transferring turnover tax receipts paid by enterprises and economic organizations under local jurisdiction to the local budgets. This procedure is employed in Bulgaria, East Germany, Poland, Romania, and Czechoslovakia. The following figures illustrate the role played by this source. In Czechoslovakia in 1977 receipts from the turnover tax on the local economy were 6.6 million koruny or 21.5 percent of all the assigned income of the national committees. In Momania the share of turnover tax in the Soviets' own income in the same year was almost 23 percent. Transferring this source to the local budget gives the Soviets incentive to develop the production of output at local enterprises. In addition, several countries have established deductions to the local budget from the profit of enterprises under republic jurisdiction; this is also considered a part of assigned income. In Hungary all stare enterprises contribute six percent of their balance profit to local budgets and in Bulgaria they pay 10 percent of above-plan profits.

The budgets of the Soviets receive some revenue from industrial, consumer, and agricultural cooperatives. Depending on the type of cooperative there are taxes on turnover, income, land, and buildings. Almost all agricultural cooperatives pay land and agricultural taxes.

Personal taxes are one of the sources of the assigned income of local budgets. In all the countries the income tax on workers and employees employed in the socialist sector is put in the category of national sources. Therefore, the tax returns to the local budget only as regulating income. Assigned income usually comes from taxes on artisans, persons in free professions, and private peasant farms. In addition, there are many local taxes and fees, for example those paid by dog owners, entertainment enterprises, and resorts. However, these payments are not a significant financial source. The local budgets increasingly draw their income from the collectivized sector.

Great importance is attached to encouraging the Soviets to use additional money for development of the local economy and to render services to the population. Wise economies in the use of budget resources are encouraged. The very mechanism of planning and collecting taxes from local state and cooperative economic organizations contains certain stimuli. Further staps to broaden the Soviets' own financial base involve mobilization of additional resources. The enlistment of additional capital depends on the ability to organize affairs and constantly seek and find reservas. This makes it possible, in turn, to increase the production of goods, expand the range of services offered, develop construction, and more fully satisfy the wants of sociocultural institutions. This capital can also be used to finance planned measures for the purpose of accelerating construction and improving services to the population.

The composition of additional income is very diverse. In the German Democratic Republic this category includes: a certain share of the profit from measures to expand the production of consumption goods and building materials; rent payments for temporary use of municipal

property; tax on entertainment events; lottery income; resort fee; fines for contamination of the environment and for illegally raising prices; penalty for failure to perform budget obligations on time. Additional income mobilized by local people's representatives is not considered when defining regulating sources. The decision on its use is made by a session of the people's representative. It may be redistributed among budgets on different levels.

The above-plan income of local national committees in Czechoslovakia includes revenue from the sale of apartments managed by local bodies to citizens, income from small repair shops, various fees, and the like. The local budgets of the other countries have similar revenue.

The growing role of local Soviets in solving problems of territorial development and meeting the social and domestic needs of working people is shown in the increasing expenditures of local budgets (see Table 2 below).

Table 2.

	1 1.	(c)	-	1		
Cube(7)	erentep)	196 г.	8970 r.	1975 *. (4	1979 r.	(1978 r. (e)* 1986 r.
Болгария (1)	man. Jesos mapa mapox hpa asorma mapa aces mapa epom	616.6 11.4 79.0 16.9 33.6	10/5.7 14 1 100 1 23.4 61.0	1330 3° 24.5 172.1 40.2 88.7	2199 0 31 6 196.7 49.6 90.5	356 277 249 250 269

Key: (a) Country;

- (b) Unit of currency;
- (c) Local budget expenditures;
- (d) 1978 (plan);
- (e) Index (1978/1975):
- (1) Bulgaria, millions of levs;
- (2) East Germany, billions of marks;
- (3) Poland, billions of zloty;
- (4) Romania, billions of lei;
- (5) Czechoslovakia, billions of koruny.

1973.

In essence the expenditures of the local budgets express economic relations involved with the distribution of relatively distinct budget funds by territorial, sectorial, and special designation. The general principles of identifying budget resources are fully manifested in this case: their target designation; granting of capital only to the extent of fulfillment of the plan and maximally efficient use; observance of strict economy measures. Capital for different activities is usually issued only within the limits of amounts envisioned in the budget.

By composition and structure the expenditures of local budgets in the CEMA countries are extremely similar. Expenditures for sociocultural measures predominate everywhere. Appropriations for these purposes account for one-half to two-thirds of all expenditures of local budgets. The budgets of the local Soviets incur 60-70 percent of all state expenditures for education, 70-80 percent of expenditures for public health, and a significant share of expenditures for culture and physical training. Development of the local economy accounts for 20-35 percent for all expenditures.

The Soviets at higher levels, the oblast and regional Soviets, solve the most complex economic and social problem. They account for a large share of the expenditures of local budgets. In Czechoslovakia, for example, the corresponding share of oblast budgets is 30-32 percent and regional budgets account for about 55 percent while city budgets are 9-11 percent and rural budgets about five percent. The reason for this distribution of resources among the particular budget elements is that most of the expenditures for education and public health are financed from the regional budgets while appropriations for housing occupy a significant place in the oblast budgets.

There are certain distinctive features in the financing of the local economy and sociocultural measures and in the organization of finances for the Soviets in Hungary. In local budgets there all types of ongoing expenditures are separated from the financing of capital investment. For this reason the finance plan of a Soviet has two parts: the budget and the development fund. Each part has its own definite set of assigned income and deductions from centralized sources. Subsidies from the central budget are allocated separately. The budget covers only ongoing expenditures for the economy, sociocultural measures, and administration. The development fund is designated for the financing of capital investment in health, educational, and cultural enterprises and for building new enterprises of local industry, municipal services, and personal service organizations. Capital from this fund may also be appropriated for capital investment in local economic organizations.

The broad functions of financing the economy and sociocultural measures create a problem of balancing budgets, even with growing income in the Soviets. In almost all the countries a balance between income and expenditures in local budgets is assured by means of deduction from some centralized income and, where it is inadequate, by subsidies from a central (higher-ranking) budget. The ratio between assigned and regulating income in the local budgets adopted for 1978 is shown in Table 3 below.

In East Germany local budgets are regulated only by deductions from centralized sources; in Poland and Czechoslovakia, on the other hand, only subsidies are used for this purpose. Several countries use both one and the other. Thus, the principles of balancing the budget of the local Soviets are fundamentally the same in all the CEMA countries. The only difference lies in the methods of achieving a balanced budget. But there are significant differences in the concrete mechanisms used to balance the budget.

Table 3 (in percentage).

	(Country)	3	0 remains or	forecent. (c)	(d)	(e)
HP6 ·	(Bulgaria) (Hungary)	27.1 19.0	67.6 55.0	5.2 26.0	=	5.2 25.0
ГДР ПНР СРР ЧССР ((East Germany (Poland)		55 0 56.5 42.3	29.8	21.4	8.4 9.5 23.4

Key: (a) Assigned income;

- (b) Deductions from centralized income;
- (c) Subsidies, total;
- (d) Special-purpose subsidies;
- (e) General subsidies.

1974.

Budget regulation gives the Soviets a reliable source of income and offers incentive to use capital economically and efficiently and to take more initiative. The first problem is resolved by a substantial broadening of the composition of regulating income, assigning several sources of income to local budgets for a prolonged period of time or on a permanent basis, and hunting for objective criteria for the allocation of regulating income or subsidies.

It is noteworthy that the range of regulating sources is broad in several countries. In addition to deductions from the turnover tax, the following deductions are used for this purpose: from the profit of enterprises under central jurisdiction in East Germany; from the payment for capital and wages tax paid by socialist enterprises in Hungary; from the tax on the total wages fund in Romania. In Bulgaria and East Germany the income tax of workers and employees is a regulating income of the local budget. The variety of regulating sources of income permits more flexible balancing of local budgets. At the same time it supports the close ties between Soviets and enterprises under central jurisdiction and gives local governmental agencies an interest in whether these enterprises fulfill their assignments for profit and profitability, as well as for other indexes. Increasing the interest of Soviets in improving the work of enterprises located in their area promotes the assignment of deductions from certain centralized income sources to local budgets for a number of years.

In addition to the variety of ways of securing councils' own and regulating income for local budgets in the CEMA countries we should note the broad use of state subsidies. In 1978 they constituted 26 percent of the total income of local budgets in Hungary, 29.8 percent in

Poland, and 8.5 percent in Romania. In Czechoslovakia and Poland subsidies from republic budgets are the only source for regulation of local budgets.

Two types of subsidies are granted, special-purpose and general. They are usually distinguished by designation and conditions of use. Special-purpose subsidies are granted primarily for capital investment and are closely tied to material support for investments in the state plan of national economic development. Money not used for its direct designation during the year is subject to being returned to the budget from which it was received. The general subsidy is allocated to balance incomes and expenditures in the corresponding budget. It does not usually have a special designation and the Soviet itself determines how it will be used. For this reason the unused part of a general subsidy is not subject to return to the central budget at the end of the year; instead, it becomes part of the corresponding funds of the Soviet, on a par with its own capital, to finance the measures of the coming year.

In Hungary subsidies are made stable by setting them for a number of years. Planning for regulating sources of local budgets, both in the form of subsidies and deductions from centralized income, is done for a five-year period. The State Assembly in a special law sets the amount of the subsidy for Soviets for the five-year plan as a whole and broken down by years. The share of deductions from central income to local budgets is fixed at the same time.

The amounts of subsidies and shares of deductions from centralized sources are set at the same time for the budget and the development fund. In this way, even before the five-year plan begins the executive committees of the Soviets know what resources beyond their own they will have and they can plan their expenditures accordingly. This gives the Soviets an incentive to work out long-range activities related to expenditures and to enlist additional income, because increasing it does not affect the granting of subsidies. They are granted in conformity with the five-year plan and can only be changed with a significant adjustment of prices or income sources.

The CDMA countries are working to secure definite income sources for local budgets, but they are also searching for reliable criteria to identify such sources of income. Of course, the basic characteristic for choosing a source of income should be its more or less even distribution over the territory of the country. Only in such a case will each Soviet receive deductions while the executive committees will have incentive to enlarge the particular source. Prom this standpoint deductions from the turnover tax and personal income tax are most suitable. In many countries these are the most frequently used sources to balance local budgets. In the countries where special payments from the wages fund of economic organizations have been instituted (Hungary, Poland, and Romania), they are also used to balance the budgets of the local Soviets.

Poland is using an interesting new source to regulate local bungets, called "revenue relative to the value of retail trade." These receipts are set as a fixed percentage of the total actual retail trade in each woewodstwo, city, and gmina and are considered to be the Sovieta' own income. The deductions themselves are transferred from the central budget; trade is merely the criterion for computing the amount.

Revenue relative to the cost of retail trade has an important place in the income of local budgets. In the budget for 1978, for example, the new source of income accounts for 91 billion zloty or 66 percent of the 139 billion zloty of councils' own income in Polish local budgets. As a result, the proportion of assigned income in the total budget revenue of the Soviets in 1978 reached 70 percent.*

The new source of income for local budgets has been used in Poland since 1974 and Polish economists have judged it favorably. In their opinion, it gives the executive committees of Soviets incentive to develop the trade network, increase commodity turnover, and expand services offered to the population.

Non-budgetary capital put at the disposal of local governmental agencies is an important tool for the development of the economic initiative of the Soviets. Non-budget funds are created from above-plan income or surpluses of income over expenditures in past years resulting from additional revenue or savings. In Bulgaria a fund for the development of territorial units and a currency fund are formed at the disposal of the district people's Soviets. In East Germany a fund of the people's representatives is formed. Poland has gmina or rural funds and city and town funds for stimulation of economic activity. In Romania there is a timber municipal fund and a fund for personal monetary contributions. Czechoslovakia has a reserve and development fund. These funds broaden the financial and economic self-sufficiency of local governmental agencies and give them a greater interest in thrifty management.

Let us point out the designation and sources of formation of some of these funds. For example, the gmina fund put at the disposal of the gmina and rural Soviets in Poland is formed from contributions by peasant farms and payments by owners of buildings unrelated to agriculture and by persons engaged in trade and crafts, contributions by economics and trade organizations of the socialist sector, the resort fee, the turnover tax, and profit from spectator events. Voluntary contributions by the population also go into these funds. The money in the fund is used for building and maintaining road and water management structures, equipping sociocultural and athletic facilities, developing services, and fixing up communities.

The fund for the development of territorial units is formed by distict people's Soviets in Bulgaria. Up to 10 percent of the above-planned profits of enterprises and associations under republic

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jurisdiction, unused budget capital from past years, and deductions from the fund for development of enterprises under local and republic jurisdiction go to form this fund. The money in the fund is used to finance the development of the material base of the service sphere, general face-lifting, road construction, building water management and sewage networks, and for special subsidies to communal people's Soviets.

In Poland reserve capital is formed at the disposal of the Soviets from additional income and cost savings during execution of local budgets. This capital comes from the following sources: deductions from above-plan income relative to the value of retail sales (up to one percent of the planned amount); above-plan revenue from taxes and fees paid by the population and from the non-collectivized sector; 50 percent of the above-plan income from other sources; unused budget appropriations for municipal and housing services and maintenance of the local administrative apparatus; the unused reserve for unforeseen expenditures. Savings in expenditures for the development of agriculture, education, public health, physical training, and the like cannot be transferred to this fund.

In East Germany a "fund to stimulate initiative in the cities and communes" is envisioned each year in the central budget. This money is used to replenish the funds of the people's representative body for use in general face-lifting and developing the service and municipal spheres. This enables the government to support the initiative of local governmental bodies at the appropriate time.

Czechoslovakia has a carefully planned and proven form of developing local initiative called "Akcija Zet." In addition to doing certain paid jobs it includes mandatory labor participation by the population (at least 30 percent of total estimated expenditures). Small public facilities, clubs, stadiums, parks, recreation zones, and the like are constructed on the basis of obligations voluntarily assumed by citizens and enterprises. Through Akcija Zet Czechoslovakia carries out many billions of koruny of capital investment each year involving planting green belts, road construction, development of the sociocultural sphere, physical training, and worker recreation. Thus, taking advantage of a successful organizational form, the national committee achieves a substantial impact with relatively small financial outlays and they involve the population and enterprises in active work to fix up cities and towns.

It should be observed that most of the other CEMA countries (Bulgaria, Hungary, Poland, and Romania) also use the labor of the public or their capital to develop the sociocultural sphere, maintain and repair roads, and fix up communities. In Bulgaria self-taxation of the population by decision of the appropriate Soviet is done for this purpose. In Hungary citizens who pay income tax make contributions each year of 50-360 forints for development of the cities and communities. One of the sources to replenish the gmina fund in Poland is voluntary monetary contributions by the population, for which direct labor may be substituted. A special fund of monetary contributions by the population

according to a resolution of the appropriate Soviet is formed in Romania and spent to build municipal and cultural buildings, fix up communities, and maintain roads. This form of active participation by citizens in fixing up their cities and towns has continued to advance in recent years.

In several of the countries (East Germany, Hungary, and Czechoslovakia) local governmental agencies can receive bank credit or loans at the savings bank to carry out certain projects under their own initiative. These loans, on application by the Soviets of communes and cities, are issued at one percent annual interest for a period of up to 10 years in East Germany. The loans are paid back with income from the measures carried out, the fund of people's representative bedies, or local budget capital. In Czechoslovakia loans are issued to expand services and develop the production of goods at local enterprises. These loans are for periods of 3-5 years at 3-6 percent ennual interest. The credit is repaid from capital in the reserve and development fund or from unplanned money received during the year. This enables the executive committees of the Soviets to respond quickly to questions of expanding production in the local areas and improving services.

Thus, the local Soviets (councils) in the socialist countries perform important economic, sociocultural, and political functions. Local budgets are the economic base of their diverse activities. Including these budgets in the single state budget insures balance in local budgets, and therefore the primary attention of the Soviets is directed to fulfilling their fundamental constitutional obligations: providing citizens with the essential conditions for useful labor and healthy life.

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11,176 CSO: 1823 MANPOWER: LABOR, EDUCATION, DEMOGRAPHY

PROVISIONS PERTAINING TO STUDENTS BOUND FOR AGRICULTURAL WORK

MOSCOW BYULLETEN'. GOSUDARSTVENNYY KOMITET SOVETA MINISTROV SSSR PO TRUDU I SOTSIAL'NYM VOPROSAM No 8, Aug 79 pp 4-5

[Resolution of the USSR State Committee for Labor and Social Froblems and the Secretariat of the AUCCTU, issued 23 May 1979 No 206/10-137: "Procedure To Be Followed and Conditions for Sending Students of Higher Educational Institutions (including Nembers of Student Detachments), as well as Pupils of Secondary Specialized Schools and Vocational Technical Schools to Agricultural Work during 1979"]

[Text] The USSR State Committee for Labor and Social Problems and the Secretariat of the AUCCTU in accordance with the Komsomol Central Committee, the USSR Ministry of Finance, the USSR Ministry of Higher and Secondary Specialized Education, the USSR Ministry of Agriculture, and the USSR State Committee for Vocational Technical Education hereby resolves:

- 1. To establish that the payment of stipends shall be maintained to students of higher educational institutions and pupils of secondary specialized educational institutions and technical schools who are being sent to perform agricultural work, and for pupils of vocational technical schools and tekhnikums the payment of stipends shall be maintained and free meals furnished; in addition to this, students and pupils shall be paid wages for the amount of agricultural work accomplished in accordance with the wage norms and piecework rates existing on the kokhozes and sovkhozes, following the procedure which has been provided for temporary workers. Moreover, the wage payments to students of higher educational institutions and pupils of secondary specialized educational institutions, as well as other educational institutions whose pupils are not furnished free meals during the period of instruction cannot be less than 1 ruble, 20 kepecks for each day that they spend on agricultural work.
- The transportation of students, pupils, and the employees of educational
 institutions accompanying them to the place of work and back shall be conducted by the agricultural enterprises and organizations, which must earmark transport specially equipped for these purposes as well as highly
 skilled drivers.

The sending of students and pupils to carry out acri ultural with bound the borders of a Union republic bot having an object division, autonomous republic, object, or kiew shall not be allowed (as a rule).

Students and pupils who are in transit for a day or more shall — plid a daily amount of 1 ruble 50 kope ks out of the funds of agricultural enterprises and organizations.

As exceptions and for a period of not longer than I month student incoming the bigher educational institutions (except those in the first and granting courses) and pupils from the senior courses of secondary period and calculational institutions (except those in graduating courses), is believed pupils from vocational technical schools (except the a first or pupils from vocational technical schools) may be enlisted for agricultural work.

Students who worked during the summer of 1977 in student into been been agricultural work.

J. For instructors, experts in on-the-job training, and other employees of higher and secondary specialized educational institutions and vocational technical educational institutions who are sent to head up groups of students and pupils to perform agricultural work (including student detachments), the wages which they receive for their principal work shall be maintained during all the time they spend at the above-mentioned agricultural work.

For the time spent in agricultural work experts in on-the-job training from vocational technical educational institutions shall be paid daily wages amounting to 3.7 percent of the total wages of all the students in the group attached to such an expert, and for the time spent in transit they shall be paid amounts in accordance with the legislation concerning payments for out-of-turn work assignments.

Other employees of educational institutions who are sent to perform agricultural work together with students and pupils shall be paid daily wages for the time spent in agricultural work and in transit in accordance with the legislation concerning payments for out-of-town work assignments.

Fay outlays to daily workers from educational institutions shall be made from funds of the agricultural enterprises and organizations.

- i. The activities of student detachments—formed during the period of agricultural work shall be carried out on the basis of instructions and methods of the USSR Ministry of Higher and Secondary Specialized Education, the USSR Ministry of Agriculture, and the Konsonol Central Committee in coordination with the AUCCTU.
- 5. Managers of agricultural enterprises, rectors of higher educational institutions, and directors of secondary specialized educational institutions shall also be obligated to recommend that the kolkhozes conclude

aureements for the carrying out of agricultural harvesting work by students and pupils in accordance with the standard agreement, as approved by the USSE Ministry of Higher and Secondary Specialized Education and the USSE Ministry of Agriculture, dated 23 August 1972, No 1-41.

6. The union republic ministries of agriculture, the Ukrainian SSR Ministry of Sovkhozes, and the local agricultural organs shall do the following:

--adopt measures to create for students of higher educational institutions and pupils from secondary specialized educational institutions and vocational technical educational institutions, sent to perform agricultural work on kolkhozes and sovkhozes, the necessary cultural and domestic conditions, as well as to provide them with the normal food, housing, and medical services;

--set up a strict monitoring of the creation on the farms of the necessary conditions for highly productive work and rest by the students and pupils, furnishing them with the necessary machinery and supplies, observing the safety conditions at work, as well as the correct application of the established statutes with regard to setting labor norms and wages.

7. Personal responsibility for the correct utilization of student labor and for the creation of housing and domestic conditions necessary for them shall be imposed on the managers of the union republic and autonomous republic ministries of agriculture, the Ukrainian SSR Ministry of Sovkhozes, the oblast (kray), and rayon agricultural organs, sovkhoz trusts, as well as an the republic, oblast (kray), and rayon trade-union committees of agricultural employees.

Supervision of the work by students and pupils during the period when they are engaged in agricultural work shall be carried out by the rectors' offices (directorates) of the educational institutions with the participation of the Komsomol organs.

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MANFONER: LABOR, EDUCATION, DEMOGRAPHY

PENALTIES FOR NOT FOLLOWING RESOURCE AND CONSERVATION RECULATIONS

MORCOW BYULLETEN', GOSUDARSTVENNYY KOMITET SOVETA MINISTROV SSR PO TRUDU' I SOTSIAL'NYM VOPROSAM No 8, Aug 79 pp 3-4

[Resolution of the USSE State Committee for Labor and Social Problems and the Presidium of the AUCCTU, issued 29 May 1979 No 226/P-5: "Procedure To Be Followed in Deprivation of Bonuses for Not Fulfilling Plans and Measures Regarding Environmental Protection and Not Observing Norms and Regulations in using Natural Resources"]

[Text] The USSR State Committee for Labor and Social Problems and the Presidium of the AUCCTU hereby resolves:

- 1. To establish in all branches of the national economy the following procedure in the deprivation of bonuses for not fulfilling plans and measures regarding environmental protection and for not observing norms and regulations in using natural resources:
- a) The directors (chiefs, managers), their deputies, chief engineers of the enterprises and organizations, as well as the workers, who are guilty of not fulfilling plans and measures regarding environmental protection (including the putting into operation of purification structures to prevent the pollution of bodies of water used for fishery operations), shall be deprived fully or partially for the basic result of the management activity.

Workers shall be deprived partially (but by no less than 25 percent) for not fulfilling the established plans and measures with regard to one or more indicators. For not fulfilling the plans and measures with regard to environmental protection, as provided for by the state plans for the USSR's economic and social development, workers shall be deprived of bonuses fully prior to carrying out the indicated plans and measures, and this must be approved by the organs which have been entrusted with monitoring of their implementation

The deprivation of bonuses completely or partially shall be carried out during that accounting period in which the nonfulfillment of plans and measures with regard to environmental protection was allowed.

b) The supervisory and other employees of the enterprises and organizations who are guilty of not observing the norms and regulations in using natural resources shall be deprived, completely or partially, of bonuses for the basic results of the management activity.

The decision on the deprivation of bonuses is adopted upon the presentation of the organs which are carrying out the monitoring of the observance of norms and regulations natural resources with respect to the corresponding natural spheres.

For the nonobservance of the norms and regulations in using natural resources the deprivation of bonuses shall be carried out completely or partially in that accounting period during which the information on the nonobservance of these norms and regulations was submitted.

2. The supervisory employees will be deprived of bonuses completely or partially upon the decision of the manager of the next higher organization in accordance with the appropriate trade-union committee, whereas other employees are deprived of bonuses upon the decision of the manager of the enterprise or organization in accordance with the trade-union compittee, regardless of the workers' involvement in the established procedure for disciplinary or other types of responsibility.

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MANPOWER: LABOR, EDUCATION, DEMOGRAPHY

ON-THE-JOB TRAINING NECESSARY FOR WORKERS

Moscow EKONOMICHESKAYA GAZETA in Russian No 37, Sep 79 p 16

[Article by L. A. Kostin, first deputy chairman of USSR Goskomtrud (State Committee for Labor and Social Problems): "Training Workers on the Job (na proizwodstve)"]

[Text] An improvement in production efficiency and work quality and uninterrupted scientific and technical progress require a high degree of skill among worker cadres. The recently adopted decree of the CPSU Central Committee and the USSR Council of Hinisters "On Heasures for Further Improvement in the Training and Up-grading of Worker Skills on the Job" is very important both in solving the main strategic problems of the development of the Soviet economy and in further up-grading the cultural and technical level of the working class of our country. It is one more proof of the constant concern of the Communist Party and Soviet government about the development of the main productive force of society.

The working class not only because of its leading role of the vanguard, but also because of its numbers is the predominant and deciding force of Soviet society. The continuous rise in the general educational level, skills, and vocational qualifications of the workers to a considerable degree predetermines the overall upsurge in the workers' cultural and technical level and is of great political and social importance. The economic significance of the quality of worker training is also on the increase. A reduction in the rate of increase in labor resources is expected in the coming years. Given these conditions, the further development of production will mainly be determined by intensive factors, and the decline in the increase in worker numbers can and must be compensated for to a considerable degree by an improvement in skills and vocational expertise.

Two Ways to Train Cadres

The state system of vocational and technical education acquires more and more importance in the training of new workers each year. Indisputably this is the main means of training the young replacements of the working

class. However, a large part of the training of worker cadres and also all the work of up-grading the level of their skills is still done directly at the anterprises. Five million workers were trained here in 1970 and 6.2 million in 1978. Moreover, 12.8 million workers and kolkhoz workers were trained in various formats for up-grading skills in 1978 (not counting economic studies).

Academic institutions for vocational and technical education are training workers in 1,408 specific jobs in mass professions. According to data of the Uniform Wage Rate and Skills Directory, overall production needs workers in almost 6,800 professions. Therefore, from 40 to 60 percent of the new workers for specific vocations in enterprises annually are trained on the job, even at large enterprises which have several base vocational and technical schools.

The system for training and up-grading cadre skills on the job is thus vitally necessary, even though it has its complexities and shortcomings in comparison with the state system of vocational and technical schools and higher and secondary specialized education. Here there is no uniform supervision, few permanent cadre teachers, and many difficulties in assuring firm textbooks and academic aids. However, its advantage lies in the fact that education is conducted at the same enterprises, on the same equipment, and in the same collectives where the pupil has to work in the future.

A wide range of problems and concrete measures to strengthen the vocational training system for workers on the job was defined in the decree which was adopted. It contains a concrete program of action for economic, party, trade-union, and communist organizations to improve the preparation and training of workers, to create conditions for the continuous improvement of their skills in accordance with the requirements of scientific and technical progress and goals of economic development. The decree provides a number of new clauses of basic importance.

Hany ministries, associations, and enterprises have accumulated considerable experience in the work of training workers on the job and have established qualified cadres of teachers, experts, and instructors in on-the-job education. Nuch work is being done in this field at the ministries of aviation, motor wehicle, shipbuilding, and electronics industries, instrument building, means of automation and control systems, the coal industry, ferrous metallurgy, installation and special construction work where branch systems of organization of vocational education of workers are in effect.

However, there are many serious shortcomings in the matter of on-the-job training of workers. Failure of workers to meet output norms is one result of the low level of skills. In industry in October 1978, where the average fulfillment of output norms was 120 percent, about one million pieceworkers did not meet the established norms.

Improving the quality of training is taking on great importance. Un-thejob training is oriented to a considerable degree toward developing narrow
practical habits and frequently does not provide the necessary theoretical
knowledge. Meanwhile the trend toward turning out multi-skilled workers
with good theoretical training is being displayed more and more distinctly
in present-day production. Therefore, it is important to develop progressive forms of education, especially courses combining in the best way
practical training with the obtaining of the needed theoretical knowledge.
The ratio of course education of the workers is increasing slowly. For
example, it represented 32 percent in 1975, while it was 36 percent in
1978.

The problem of the time periods of on-the-job vocational education, especially for retraining cadres, is in need of being made more precise. The established periods of training have been calculated for persons with an eight-year education, but today young people enter the enterprises with a secondary education for the most part. Therefore, we have to review the current lists of vocations for which there is on-the-job training of workers and establish precise periods for their education.

Progressive Forms of Education

The systematic and planned improvement of worker-cadre skills becomes very important under conditions of rapid scientific and technical progress. In practice every worker becomes a real expert in his field only directly on the job, in the process of productive labor combined with continuous acquisition of knowledge and habits both independently and as a result of studying in various courses to up-grade skills.

The system of retraining and improving cadre skills is called upon to guarantee the up-grading of worker skills in accordance with the growing demands on the level of their knowledge, to promote the acquisition of new vocations, and to establish the necessary conditions for continuous professional growth.

In the economy as a whole 15 percent of the workers annually up-grade their skills. This means that workers are undergoing training in courses to up-grade their skills on the average of once every 6 to 7 years. Under present-day conditions this is obviously still inadequate. Ministries and departments, on the basis of the peculiarities of their branches, should establish a scientifically based periodicity for up-grading worker skills in departmental enterprises. It is important that each worker undergo training within the established periods.

In recent years the proportion of persons studying in schools of advanced labor methods has risen, but this form of education as before is not being used adequately. For the national economy as a whole in 1978 only 2.5 percent of the workers studied the means and methods of work of leading and innovative production workers in such schools.

Education in such formats for up-grading skills as courses for developing second and combined vocations promotes a significant reduction in outlays through more rational utilization of time and interchangeability of workers. A total of 1.9 million workers studied in these courses (not counting kolkhores) in 1978. To promote more extensive use of this form of upgrading skills ministries and departments should draw up approximate lists of vocations which may be expediently recommended for combining.

In the majority of industries, associations, and enterprises a great deal still has to be done to create the conditions necessary for on-the-job vocational education. The ministries and departments are charged with approving standards for creating an academic production base for training and up-grading cadre skills on the job and including them in the norms for technological planning which are obligatory for planners. On the basis of these standards ministries and departments must establish for the period 1981-1985 goals for departmental associations, enterprises, and organizations for expanding and constructing the academic-production base and also take measures to supply it with the necessary academic aids, equipment, and technical means for education. Expansion of the academic-production base is being accomplished by capital investments allocated for the construction of projects intended for production of those branches of the national economy for which cadres are being trained.

Along with the strengthening of the material base, improvement in the make-up and training of teachers of theoretical education and instructors of production education is very important. Many of them, while good specialists, still do not have the necessary knowledge in the fields of pedagogy and psychology and experience in pedagogical work. Therefore, it is very important to improve substantially the selection of theoretical teachers and production instructors, to provide them with systematic assistance in up-grading the level of knowledge in the fields of pedagogy and psychology. There is positive experience in this field in a number of enterprises in the Estonian SSR, the Ministry of the Chemical Industry, and a number of other industries.

To Improve the Academic Process

Beginning in 1980 the academic load for teachers in academic course training centers is set at 3 hours of instruction a day instead of the present 4 hours. This will make it possible for teachers to be better prepared and to conduct lessons on a higher level.

Problems regarding the awarding of bonuses to workers in academic course training centers and other academic institutions of the vocational education system have been solved. It is projected that in the lith Five-Year Plan measures will be implemented to improve wages for teaching workers. It is important that ministries and departments of the USSR and councils of ministries of union republics be granted the right to keep for workers sent to courses for training and up-grading their skills while on leave from production their average wages for a period up to 3 months within the limits of the approved wage fund.

The decree devotes an important place to improving the planning and administration of this work. Methodological recommendations have to be prepared in planning on-the-job vocational education of workers. It is important for them to consider the need to fully satisfy the demand for skilled workers with close coordination of the plans for up-grading skills and the changes in equipment, technology, and labor and production organization. Ministries and departments are charged with establishing for associations, enterprises, and organizations annual targets for training and up-grading worker skills with separate targets for up-grading women's skills. Momen workers who have children up to 8 years of age will take retraining courses with leave from work and retention of their average wage. Obviously it would be expedient in enterprise targets for training skilled workers especially to select the training of workers in courses and schools of advanced labor methods.

We have to approve a new statute on the vocational training of workers on the job which must define the procedure and conditions for the functioning of this system. Ministries and departments will approve industry statutes on the basis of a model statute which will be prepared this year.

To increase the role of USSR State Committee for Vocational and Technical Education in carrying out a uniform state policy in the field of training skilled workers and to assure the coordination of the work of ministries and departments and the drawing up of appropriate recommendations it has been decided to reorganize the methodological council of the USSR State Committee for Vocational and Technical Education into an interdepartmental council on vocational and technical education, training, and up-grading of worker skills. This council will become the center called upon on the basis of specific scientific research and generalization of economic practice to develop proposals to improve the training of skilled workers. The one-time registration of cadres and academic-production bases of the system of vocational education of workers on the job, which is planned for 1983, will be of great importance.

One of the main tasks of the USSR State Committee for Labor and Social Problems is the exercizing of control over the carrying out of party and government decisions on questions of training and up-grading cadre skills on the job. The labor agencies in each republic must carry on major organizational work with the ministries and departments, provide them with the necessary assistance in preparing concrete measures to improve the effectiveness and quality of on-the-job vocational training of workers, and to step up the work of identifying and generalizing advanced experience.

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PROVIDING OF LABOR INCENTIVES

Moscow IZVESTIYA in Russian 23 Oct 79 p 2

[Article under rubric "IZVESTIYA Economic Consultation": "Labor Incentives"]

[Text] The decree of the CPSU Central Committee and the USSR Council of Ministers concerning the improvement of the economic mechanism has stipulated the carrying out of the socioeconomic tasks involved in making fundamental changes in labor. A series of measures have been set down for improving the planning of the needs of the national economy for labor resources and their distribution, both among the individual branches of the economy and on a territorial basis. In this regard, the five-year plan will provide, with a subdivision by the individual years, for the development of labor-resource balance sheets on the basis of scientifically substantiated norms and norm lists for the expenditures of labor. At all levels of economic management, the plans include composite sections dealing with social development. There will be an intensification of planning in the distribution and redistribution of manpower resources, and steps have been carried out for the further reduction of manpower turnover and for the permanent assignment of personnel.

In addition to improving the practice of planning the labor resources, there has been an intensification of the supervision of their actual use. There has been an increase in the responsibility borne by the ministries, departments, the local planning agencies, and the labor agencies with regard to the providing of the production associations and enterprises with manpower, and with regard to finding jobs for workers who are becoming available.

In order more completely to take into consideration the measure of participation by the production collectives in the creation of the new material blessings, the indices and criteria for evaluating their activities are changing. Both in planning and in the organization of economic incentives, the index of labor productivity has been moved into first place. At the present time it is becoming the main fund-forming index.

The very approach to the fermation of that index is also changing, inasmoc. as it is planned to carry out a gradual changeover to its computation on the basis of net (normative) output. If, however, one considers that the net output characterizes the collective's own labor and the newly created product, one becomes completely aware of the complete interrelationship between the labor-productivity index computed on the basis of the net output and the final labor contribution made by each association and enterprise.

There will also be a new approach taken toward the formation of the wage fund of the associations and enterprises. Now the wage norm that will be approved is the wage norm per ruble of output (normative) or on the basis of another index, applied in the individual branches of the economy for the purpose of planning labor productivity with a consideration of the specific nature of those branches. That means that lying at the basis of the planning of the increase in labor productivity and the wage norm per ruble of output will be one and the same index — the final labor contribution made by the production collective, rather than the total value of the gross output, as had been the case previously.

The decree has stipulated that the evaluation of the activities, as well as the providing of economic incentives for the associations and enterprises in industry, is to be carried out on the basis of the execution of the plans for deliveries of output according to products list (variety) and within the deadlines, in conformity with the concluded contracts; the increase in labor productivity; the improvement in the quality of output and the increase in profit or the reduction in production costs. The providing of labor incentives for workers at construction-and-installation organizations will be carried out on the basis of the results of the fulfillment of the assignments for the activation of production capacities and projects; the commodity construction output; and the increase in labor productivity and profit.

Deductions of amounts of money to be paid into the material incentives fund will be made not on the basis of the fulfillment of the gross value indices, but on the basis of norm lists governing the increase in labor productivity and the increase in the quality of the output and profit. A direct dependence is also established between the amounts of the deductions to be paid into that fund and the fulfillment of the contractual obligations pertaining to the deliveries of output. In individual branches of industry, taking into consideration the specific nature of those branches, one can also use other fund-forming indices.

The fund for social-cultural measures and housing construction will be created in the amount of 30-50 percent of the material incentives fund, and the fund for development of production, on the basis of the norm lists, to be paid for by deductions from profit, depreciation deductions intended for the complete restoration of the fixed assets, and the proceeds from the sale of retired property. The procedure for the creation of these funds is, for the most part, the same as a previous procedure, but their incentive action upon improving the organization of labor and the providing of incentives for workers is increasing. This is expressed first of all in the

fact that the extent of the fund for social-cultural measures and housing construction is made directly dependent upon the size of the material incentives fund, and the formation of the latter, as has already been noted, now depends entirely upon the fulfillment of the plan for the increase in labor productivity and the improvement of other qualitative indices and the fulfillment of the deliveries plan.

It has been planned to carry out a series of steps to accelerate scientific-technical progress, and this is the key to building up the rates of increase in labor productivity. It is precisely their consistent implementation that guarantees the increase in the benefit from the labor expenditures. And vet in individual associations and enterprises one still notes the slow rate of renovation of technology and of removing obsolete technology from production. Insufficient attention is devoted to expanding the output or to introducing fundamentally new types of technology. Something that is becoming an organic part of the planning decision for this problem is the development of comprehensive programs for scientific-technical progress, as well as the development of special-purpose programs. The primary importance among them will be attached to the program for reducing the application of manual labor; the carrying out of this program will make it possible to free a large number of workers engaged in subsidiary operations.

The five-year plans for the ministries and departments will reflect the plans for raising the technical level of the branches of industry and construction. The number of mandatory indices for the technical improvement of production has been expanded. The planning of the economic benefit derived from the introduction of scientific-technical measures has been introduced for the first time. In addition to a limit on the total number of workers and employees, an assignment for the reduction of the share of manual labor will be established. The planned measures will be financed from the money in the uniform fund for development of science and technology, which fund is being newly created for the ministries. Work is being carried out to reconsider the obsolete standards for machinery and equipment, in such a way as to intensify the orientation upon reducing their weight, reducing the expenditure of fuel and energy in the process of operation, and thus to make them more productive.

There has been an increase in the role of norm-setting for labor. The introduction into planning practice of long-term norms for wages per ruble of output will make it possible to make the wages paid to each worker and to the collective as a whole dependent upon the increase in labor productivity and the improvement in the final work results. In the event of overfulfillment of the production plan, the associations and enterprises will receive an additional wage fund, on the basis of the norms established for them. If, however, the actual expenditures for the payment of labor prove to be lower than those specified with a consideration of the planning norm, the economy with regard to the wage fund is to be sent to the material incentives fund and is to be used to pay the wage differentials to workers in recognition of their professional skill, high level of qualification, or combining of occupations.

The measures to provide incentives for labor and wages also include the establishment of lump-sum awards to those workers who, on their own initiative, provide for the introduction of technically substantiated labor norms and their prompt reconsideration. The source of money to pay for these awards is the economy derived from the reconsideration of the norms that were previously in effect.

The providing of incentives to collectives at associations and enterprises for the introduction of progressive, technically substantiated norms can be carried out by establishing rates that have been increased by as much as 20 percent when working according to the new norms. The introduction of this incentive system at the production associations and enterprises is possible with the consent of the USSR State Committee for Labor and Social Questions.

An important condition in carrying out the planned measures to improve the use of labor is the constant study and application of the advanced experience in this area. And that experience exists in many branches of the economy and the production collectives, even though it is not always used with the proper initiative. The decree stipulates that now the industrial ministries will include in the state plans for economic and social development the special assignments for the introduction of advanced experience in the area of technology, the scientific organization of labor, production, and administration.

5075 CSO: 1823

TRANSPORTATION

PROBLEMS WITH HAULING CRAIN REMAIN UNSOLVED

Grain in Safe Grain Bins

Moscow TRUD in Russian 29 Sep 79 p 1

[Excerpt] Of no less importance is the task to organize the storage and transportation of grain to grain-receiving enterprises. The majority of them were prepared in advance to receive the new harvest. Thus, in the Kustanayskaya Oblast 70 cropdryers which were manufactured by local skilled craftsmen, are capable of processing 100,000 tons of grain daily. The capacities for storing it were prepared in time and all machinery is operating smoothly. However, here and in the neighboring Ural'skaya and Aktyubinskaya oblasts a great deal of grain is still lying under the oran sky on unprepared platforms. The power of the elevators is not boundless, but there is nothing on which to bring the grain out, for there are not enough train cars.

For example, the Zapadno-Kazakhatanskaya Railroad was suppose to deliver 2,200 cars to the Ural'skaya Oblast in September. However, only half were delivered. The Yuzhno-Ural'skaya Railroad regularly is short by almost ore-half of the required number of empty cars at the grain-receiving points of the Aktyubinskaya Oblast.

Grain cars have been poorly organized and prepared. Often in the cars there are open cracks, unrepaired hatches, crooked doors and inside there is broken glass and dirt. The same situation existed last year, but the railroad workers have done little in order to correct the situation.

Often grain remains under the open sky and that is the fault of the river transport workers. At many of the elevators of the Bashkirskaya ASSR there is a difficult situation. Thousands of tons of grain are lying under the open sky, but the Volga River Steamship Line consistently does not meet its delivery schedules of ships to the Belaya River.

It is necessary to deliver grain to the waiting bins as quickly as possible. Trade union organizations must quickly find the inadequacies, and take rapid and effective measures to eliminate them. The success of the entire harvest for the fourth year of the five-year plan depends on this.

Difficulties in Grain Transport

Minsk SOVETSKAYA BELORUSSIYA in Russian 26 Jul 79 p 1

[Text] In all corners of Grodnenshchina one now sees cars with the sticker "Harvest-79" on it. The majority of them belong to the oblast production motor transport administration. It allocated 241 cars for grain transport. This included 96 train transport cars. This is significantly more than last year.

Deputy chief of the oblast motor transport administration V. V. Klochko tells, "The volume of work has increased immeasurably. We have 140,000 tons of grain to carry out from the threshing floor to grain-receiving points. I will note for the sake of comparison that last year 83,200 tons of grain were harvested."

At what expense will growth be achieved? Primarily it will be achieved at the expense of the central haulage of grain. Last year motor transport workers of the oblast widely used this progressive form of labor organization. However, due to a lack of coordination only 70 percent of the grain could be transported using the new method. Now the plan is to deliver 90 percent of the grain using the central haulage method.

They are primarily counting on the trailer truck train. The efficiency of their use speaks for itself: one such "group" replaces four cars without trailers. The standard for its transportation of grain has been established to be 35 tons per 24-hour period. For each trailer truck an experienced driver is assigned as well as a replacement in order to organize the work into shifts. All of the crews took on great obligations and concluded agreements for brigade contracts.

However, barriers appeared in the way of central haulage again as it occurred last year. The "greatest" of them was an inadequacy of large scales for weighing truck trailer trains. Last year out of the 16 grain-receiving points in the oblast, they existed only at six of them and were not used there to the fullest extent. Now six more "Guar-30" units have been received. But even up until now, some of them have not been put into operation. For example, in Lida, although scales have been set up, it is impossible to use them for weighing trailer truck trains—there is not enough room. The "Guar-30" has not been included in the work in the Shchuchinskiy Rayon. At the Slonimskiy grain-receiving enterprise they irresponsibly treated the installation of it. A great deal of grain will come here at any moment and they are still looking for a crane in order to establish the truck scales.

I must say, that this is not the only inadequacy. Even those scales which have already been installed and operate, cannot be used to the fullest extent because some of them have not had special entrances constructed and

are not equipped with platforms for receiving trailer truck trains.

"We plan to use 96 trailer truck trains," continues the deputy chief of the oblast motor transportation administration V. V. Klochko. "However, already at the beginning of the harvest we have "lost" 15 of them which is the fault of the grain-receiving point workers. What will be next?"

With every right, this question can be addressed to the oblast administration of grain products. Because of its slowness and lack of efficiency, new barriers have appeared on the path of central haulage. A. Kuchinskiy.

Grain in the Rain

Moscow TRUD in Russian 16 Sep 79 p 1

[Text] With each day the flow of Bashkirskiy grain is increasing at the receiving points. But not all of them are able to manage processing the grain. A difficult situation has developed at many of the elevators.

"All of the capacities have for a long time been filled," cried Director of the Dyutyulinskiy elevator B. Kashapov in an alarmed manner. "Grain continues to arrive, but there is no capacity for unloading it. And now over 6,000 tons of grain lie under the open sky. If it rains—it will be a pity."

In August the Volga River Ship Transport carried out just over half of the plan for serving the ships on the Belaya for grain hauling. The plan for September delivery is also not being met. During the first ten—day period of this month, the Volga Ship Transport planned to be short in its delivery to Belaya by 13 ships with a total capacity of 26,000 tons as well as four barges. V. Troyegubov, the head of the Volga Ship Transport does not make any explanations about this.

"Receive things on our schedule and do not count on anything more."

But this schedule is contrary to the plon of transporting grain along the Belaya. This plan was approved by the ASPSR Ministry of the River Fleet.

We must hope that the ministry will call to order the "spotters" from the Volga River Ship Transport. F. Sharipov, worker for the Bashkirskiy operating and dispatching center on the administration of agricultural products transportation.

Response to Grain Transport Problems

Hinsk SOVETSKAYA BELORUSSIYA in Russian 23 Aug 79 p 1

[Text] The Belorussian SSR Ministry of Procurement reports that facts presented in the critical articles "Barriers in the Way of Central Haulage"

which was published in the SOVETSKAYA BELORUSSIYA on 26 Jul 79, truly had a place.

It correctly noted the inadequacy in the organization of work for constructing truck scales for motor transport vehicles at the enterprises of the Grodnenskaya Oblast Production Association of Grain Products.

The newspaper article was studied at the open party meetings of the organization of the association with a complete analysis of the short-comings listed in the article. The association developed additional measures, established time limits and defined definite ways to eliminate the shortcomings which were noted.

At the present time, work on the construction of large truck unloaders Guar-30 at the Lidskiy, Novoyel'nyanskiy and Grodnenskiy grain-receiving enterprises have been completed. M. Samonov, deputy minister of the Belorussian SSR Ministry of Procurement. [101-8714]

8714

CSO: 1823

TRANSPORTATION

CHANGES NEEDED IN DISTRIBUTION OF RAIL FREIGHT CHARGES

Hoscow GUDOK in Russian 16 Oct 79 p 2

[Article by N. Perepelitsa, head of the financial service of the Western Siberian Railroad and Candidate of Economic Sciences A. Razuvayev, docent of Scientific-Research Institute of Rail Transport, under rubric "Perfecting the Management Mechanism": "How to Share Income"]

[Text] As is well known, the rates charged for hauling goods and passengers constitute the price of the transport product. The size of such rates [tarify] is affected by the distance the goods are hauled, the means of delivery, the type of rolling stock, and other factors. All of this eventually accumulates in the actual average income rate, determined by dividing the earned income by the reduced [privedennyye] ton-kilometers completed by the railroad (these comprise the total tariff ton-kilometers and passenger-kilometers).

The average income rate is not officially set for the Ministry of Railways and the railroads. But in practice the planning of transport economic indicators is structured so that the income rate for the planned period is higher than the level achieved in the report year. For example, the income per 10 reduced tow-kilometers in 1971 was 4.000 kopecks, while the plan for 1972 was set at 4.027 kopecks. Thus also for all the subsequent years, practically to this day.

It would seem that the difference in the planned and the actual income rate was insignificant—mere thousandths of a kopeck. Multiplied by billions of ton-kilometers, however, this difference adds up to millions of rubles.

In 1978 alone, because of underfulfillment of the planned income rate the Western Siberian received 14.7 million less rubles of income. The chief "guilty factors" were freight shipments. The railroad's basic freight is hard coal. It accounts for about 37 percent of all freight turnover. The creation of a new railroad—the Kemerovo—did not essentially change things: Kuznetsk coal still goes chiefly to the Urals and the European part of the country via the Western Siberian.

In recent years, meanwhile, the income rate for coal has been going sown. In 1975 it was 2.805 kopecks; in 1978 it was 2.750. What is the reason

The distance this freight is hauled has been rising year by year. And this rise inevitably leads to reduced income. Incidentally, this newspaper commented on this matter in a 5 October article "Transit is Beneficial."

The increase in the proportion of goods having a low income rate, on the one hand, and the reduction in the proportion of goods having a high income rate, on the other, have substantially reduced the railroad's income. Thus, the proportion of hard coal shipments in the railroad's freight turnover rose from 34.4 percent in 1975 to 36.9 percent in 1978. The same thing has been observed in the case of other similar types of freight (chemical and mineral fertilizers, for example, having an income rate of 1.54 kopecks). And the proportion of what are known as other types of freight having a substantially higher income rate (5.89 kopecks), conversely, has been declining.

In the long run, all of this leads to a reduced average income rate per 10 to discuss. In 1975 it stood at 3.609 kopecks; in 1976, 3.605; in 1977, 3.584, and in 1978, 3.5.

Shipments of hard coal, chemical and mineral fertilizers, and in general types of freight having a low income rate have a tendency to rise faster. This means that the average income rate on the Western Siberian will continue to decline. Meanwhile, the existing system of planning takes practically no account of this tendency.

In our view, income from shipping should not be planned in a general way but by types of freight, in accordance with the annual plan's products list. This means that the railroad's freight turnover plan should also be drawn up by types of freight. This kind of change alone can enhance the substantiation both of the income plan and the freight turnover targets.

The CPSU CC and USSK Council of Ministers decree "Improving the Planning and Strengthening the Influence of the Economic Mechanism on the Effectiveness of Production and Work Quality" directs the transport ministries to work out a new system of planning, accounting, and administration of this sector of the economy. One of the most important measures for perfecting planning in rail transport should be fuller and more integrated accounting of the railroads' work volume and income.

It is high time this was done. There is even greater confusion in the distribution of income in what is known as mixed rail-water transportation. As is well known, amounts charged for shipping are distributed as follows: The loading railroads earn income for the initial operations; the unloading railroads get it for final operations; while income for the haulage of the freight is distributed in proportion to the distance it has traveled on the

railroads that carried the freight. But if, for example, coal is being shipped from Siberia to the Ukraine with transloading at Perm' and Ust'-donetsk, payment for the initial operation will go to the sending railroad, payment for the final operation will go to the unloading railroad, while the Sverdlovsk and North Caucasus railroads, which completed the transloading, will not get paid for the freight operations of forming and unforming the trains, preparing the cars for loading, delivering and removing the cars, and drawing up documents. Is this fait?

Looking through the report forms concerning freight departures and arrivals, it is easy to see that every year between 1 and 1.5 million tons of coal forwarded from the stations of the Western Siberian and the Kemerovo railroads in mixed rail and water transportation (with two transloadings) never show up in the arrival report. Between 1 and 1.5 billion ton-kilometers of work actually done, yet the railroad's collective never gets the 2 to 3 million rubles they legally have coming to them.

In our opinion, it wouldn't take much to ensure that this kind of thing does not continue. All it takes is a few changes introduced into procedures for drawing up shipping documents on mixed rail and water transportation with transit by water. For example, if the forwarding station makes two copies of the railroad statement and bills for carriage payment up to the first transloading point (using an exceptional tariff, of course, with a discount of 30 percent), the problem can be solved easily. In the supplementary copies of the railroad statement, of course, the total billed payments should not be included.

At the same time, the freight with its waybill and copies of the railroad statement should be forwarded to the first transloading port, where the primary freight downment is to be submitted by the transloading station to the computer center to record the work done and the income. When the freight arrives at the second transloading port, the rivermen should keep one copy of the railroad statement and forward the second along with the waybill to the railroaders when handing over the freight to be forwarded to its destination. Carriage payments in this final stage are to be billed for on delivery of the freight as for a new shipment, using the exceptional tariff. The amount billed is given in the copy of the railroad statement. The destination railroad records and distributes the income from the station receiving the freight from the water transport to the destination station.

The proposed procedure does not require any additional labor outlays, yet it will make it possible to take full and prompt account of the railroads' work and income. Moreover, all participants in a given shipment will be paid for their actual contribution to the transport—both for haulage and for initial and final operations.

Analysis shows that even losses that are insignificant at first glance are strongly reflected in the final results of a collective's work. The logical conclusion is that it is time to consider scrupulously and in detail the actual contribution of each collective in the transport cycle. Without absolute accuracy in accounting it is not possible today to count on any serious improvements in the effectiveness of transport production.

6854 CSO: 1823

GENERAL-PURPOSE CARGO SHIP VAVCHUGA

Moscow MORSKOY FLOT in Russian No 9, 1979 signed to press 30 Aug 79 pp 33-35

Article by N. Krutalevich and V. Vladimirtsev of the Leningrad Planning and Design Bureau: "General-Purpose Ship Vavchuga"

Text? The lead, general-purpose ship Vavchuga was built at the Krasnaya Kuznitsa ship repair facility in Arkhangel'sk from a design of the Leningrad Central Planning and Design Bureau. The vessel is intended for the summertime shipments of international type IC containers, railroad containers, mobile equipment, and diesel fuel that is taken on in White Sea, Barents Sea, and Karsk Sea ports. The possibility of unloading mobile equipment on unequipped shore points has been provided for. During the winter, the vessel will complete foreign trade runs in the Baltic basin.

The need for the construction of this general-purpose ship stemmed from the fact that the White Sea, Barents Sea, and Karsk Sea ports are shallow ones with large amplitude rising and ebbing tides, deep-angled sloping shorelines, and a multitude of unequipped ports through which a large amount of cargo passes during the brief, summer navigation period. The delivery of cargo to these points by small transport ships requires in-harbor transshipments on to low-draft vessels and the use of large amounts of strenuous manual labor. The Vavchuga is capable of delivering diverse cargoes, without harbor transshipments or the use of additional craft, and of reloading the cargo onto an unequipped shore using its own machinery. General and bulk cargo is unloaded from the ship by a crane, a grab, and extensitle belt conveyor. Mobile equipment is reloaded on a lifting bow and a ramp. The containers are reloaded using the crane and a tractor-driven fork-lift, while the liquid cargo is transferred by pumping, using the ship's cargo pumps and special hoses with a total length of 800 meters.



Lifting bow and ramp

The general-purpose ship was built as a KM 131 class of USSR Registry. The Vavchuga is a two-decked, twin-screw vessel containing a minimum freeboard, a forecastle, a quarterdeck, a machine room in the stern, quarters and working spaces, a lifting bow, and a stern ramp. The hull of the ship is divided into watertight bulkheads containing seven compartments. The supply of fuel, lubricating oil, and fresh water insures autonomous sailing for up to 10 days. Provisions are allotted for 30 days.

Ship stability complies with USSR Registry requirements for unlimited navigation ships. The unsinkability of the ship is maintained in the event of the flooding of the cargo hold or of any of the other compartments.

Basic characteristics of the ship are:
Length
overall
between perpendiculars

72.5 meters 65.6 meters

Beam	13.0 meters
Depth	
to the upper deck	4.4 meters
to the lower deck	3.0 meters
to the quarterdeck	5.9 meters
Draft	
hauling 400 tons of cargo	1.8 meters
Displacement	
under a 1.8 meter draft	1,365 tons
Cargo Capacity	
under a 3.0 meter draft	1,269 tons
Deadweight	
under a 3.0 meter draft	1,360 tons
under a 1.8 meter draft	460 tons
Speed	10.4 knots

The crew is quartered in well-equipped single and double occupant cabins and the necessary health and comfort and working spaces have been provided.

The ship contains twin screw, unit-cast, four-bladed propellers and two tubular, fair-form, semi-underhung rudders. The electrohydraulic steering engine works up a torque of 2.6 ton-force on the stock. A pump mounted in the steering gear compartment serves as a spare drive. The control room for the primary steering gear is located in the wheelhouse. The control system is electric, remotely operated, and contains an automatic steerer.

The ship contains two bower and one stern anchors, each with a Hall mass of 1,250 kilograms. Emergency dropping of the anchors is accomplished with the aid of remote engines located on the upper deck in the steering gear compartment.

The ship's life-saving gear comprises two type SShAM20 boats and two type PSN-6M rafts. A 3.5-meter long plastic work boat can be operated with a pivoted engine. A type KEG12018 cargo electrohydraulic crane, with a load capacity of 12 tons and a 19-meter boom, is fitted on board. The crane permits the unloading of loose cargo using a monocable grab with a capacity of 2.5 cubic meters.

Unloading of loose cargo on to unequipped shore points is done using a 26-meter conveyor, at a cargo movement rate of 1.5 meters per second, and a bunker and feeder. The conveyor is located in a special area on the port side of the lower deck.

The hose for the transfer of diesel fuel is stored in a special vertical reel. The reel drum is mounted on the cargo crane

column and is connected to the revolving part of the crane by a bar.

A 4-meter wide collapsible ramp is located in the forward part of the ship. Its total length in the working position is approximate'y 9 meters, and it is secured for sea in the bow compartment. To move the ramp, the bow section of the ship (with the aid of two hydrocylinder with a traction force of 76 ton-force each and two electrohydraulic pumps) lifts up and rotates around the horizontal axis. The lifting bow is connected to the hull by a hinge located under the forecastle deck. The ramp and the revolving bow are connected along the sides by rods, which insure the simultaneous opening or closing of the ramp and bow for 5 minutes while operating with one of the pumps. The ramp is designed to handle trucks with an axle load of 20 ton-force and tractor vehicles weighing 50 tons.

The cargo hatches are closed with five removable covers. Special planks are secured to inner bottom deck planking to fasten the standard 20-foot containers. Housing has been inserted in the cargo hatch covers, in which stoppers for fastening the containers are set. Deck frames and eye bolts have been welded to the cargo hatch covers along the longitudinal comming and detachable shackles and tightening devices with turnbuckles have been installed to secure timber cargo.

The ship is supplied with two containers with 0.5 cubic meter capacities to collect refuse and cargo equipment for transferring of the containers to piers.

The power system comprises two reverse reduction gear diesel units containing type 6VD26/20 AL-1 engines with a 720 hp output each, three type DGR 100/750, 100 auxiliary diesel generators with an output of 100 kilowatts each, a steam boiler with an output of 1 ton per hour, two utility boilers with a 330 kilograms per hour output each, auxiliary machinery and equipment for maintaining the reverse reduction gear diesel units and diesel generators, and general purpose machinery and equipment.

A ballast system is installed on board the Vavchuga to adjust the draft and trim of the vessel either when it is loaded with cargo or when it is cargo free. The system is maintained by a type NTsVS-40/30M single, electrically driven, self-priming, vertical, centrifugal pump that supplies 40 cubic meters per hour to support the filling and pumping out of the ballast tanks and the cooling of the auxiliary diesel generators when operating in a "drying" mode.

Drainage of the machinery and steering gear rooms, the cargo hold, the tanks for bilge and waste water, for the release of residue and waste, separation, the companion way, chain lockers, and the enclosure for the echo sounder oscillators is accomplished using two type NTsVS-40/30M pumps supplying 40 cubic meters and two type VEZh-6/7 water ejectors with an output of 6 cubic meters per hour each.

A bilge water treatment system is operated by one electrically driven piston pump with an output of 1 cubic meter per hour and one type SK-1 bilge water separator with an output of 1 cubic meter per hour.

The ship can handle up to 400 tons of diesel fuel, which is taken on from the upper deck at a frontal deckhouse bulkhead into the outboard and bottom tanks. The fuel transfer system is supported by one type EPN7/3 electrically driven vertical pump with an output of 55 cubic meters an hour.

The level of automation of the power system makes it possible to maintain the machinery without manning a 24-hour duty watch in the machine room.

The remote control members for the reverse reduction gear diesel units and the auxiliary diesel generators; the devices for the remote control of the critical parameters of the power system; and signalling gear are located in the wheelhouse. The remote control room makes it possible to start ready and primed engines, to change the frequency of revolution of the diesels, to control the reverse reduction gears, and to shut down the diesels. An engine telegraph is available if the remote control system malfunctions. The main parameters of the reverse reduction gear diesel units and their maintenance systems are controlled using a control panel in the wheelhouse. The wheelhouse also contains monitoring equipment for the main and auxiliary machinery, main switchboard, steering gear, tanks, and other mechanisms.

The ship's power station comprises three type DGR 100/750 diesel generators containing type GSS-103-8M generators with an output of 100 kilowatts and a self-excitation and self-adjusting voltage system. Power can also be supplied from shore-based sources. The Vavchuga lso is fitted with modern radio navigation equipment.

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7198 CSO: 1823

TRANSPORTATION

SHIP COLLISION AVOIDANCE RADAR DISPLAY

Moscow MORSKOY FLOT in Russian No 9, 1979 signed to press 30 Aug. 79 pp 26-27

Article by U. Zurabov, division chief V/O Morsvyaz'sputnik; Ye Georgizon, leading instructor; Yu. Koshelev, captain of the training-production ship Zenit; and Ye. Yakshevich, sector chief, Central Scientific Research Institute of the Maritime Fleet: "New Domestic Manufactured Ship Collision Warning System"

Text The project planning for the self-contained specialized radar display Briz-Ye was completed in 1978 and was based on the experience gained in operating the Bris-1 system on Krym class superships. The Bris-Ye system was designed to be operated not only on superships, but also on medium tonnage vassels. Primary attention during its development was paid to increasing operational reliability, the accuracy of determining the movement parameters of approaching vessels, and the convenience and simplicity of operation of the equipment by navigation personnel.

State tests of the Bris-Ye system were conducted between July and September 1978 on board the training-production ship Zenit. The test results supported a recommendation for the series production of the display and its installation in maritime fleet vessels. In terms of its technical and operational characteristics, the Bris-Ye display is on a par with the finest world models, and in some ways is superior to them.

Structurally, the display is a console type containing a special computer in its lower section. A40-centimeter diameter scope and the control members are situated on a vertical panel on the console (at a 70 degree angle). The display can be operated in conjunction with the Yenisey, Okean, and Mayada radar sets in the 3 and 10 centimeter bands, as well as through the combined processing of signals from both of these bands. Data on course (from Kurs or Vega type grocompasses) and speed (from MGL-25)

or IEL-2 logs) are input into the display automatically. The manual entering of data on the speed of the ship in which the display is installed (the tracking ship) also is possible.

Secondary graphic and digital information retrieved from the computer after the processing of data from the radar set is displayed simultaneously with standard primary radar images. The navigator has the choice of displaying the secondary information on either 4.8 or 16 mile scales. The initial locking-on of targets for tracking is accomplished by the navigator either by guiding a special marker on to the target or automatically when intersecting the blip of the automatic detection ring. Up to 20 targets can be tracked simultaneously.

The computer assisted processing of the radar data involves the automatic measurement of the bearing and range of the tracked targets during each scan; the automatic computation of the course and speed of the tracked targets based on the relative and true lines of movement, as well as the distance to the closest approach to the targets; the computation of the extrapolated situation when there is a change of course in the direction of a safe passing during a dangerous situation; and the processing of the data required for displaying the secondary information on the scope for all of the tracked targets.

The secondary information comprises the marker, the tracking ring, the vector of the relative or true speed of the target (the line of the direction of movement), digital data on the course and speed of the tracking ship, and log and digital data on the tracking targets. The layout of the display of the graphic components and the digital data for the secondary information is shown in Figure 1. We will now present more specific information on the content of the secondary information and on methods for its practical use.

The marker is a 10-millimeter diameter circle with a dot in the center that is used for manual locking-on of the targets for automatic tracking, dropping targets from tracking, calling up for display log data for any single tracked target, measuring the bearing and range to any untracked target, establishing the distance of the automatic detection ring, and manually entering information on the speed of the tracking ship.

Control of the position of the marker on the scope is accomplished using a directional sphere on the right side of the horisontal panel of the display. The direction of the rotation of the sphere conforms with that of the motion of the marker on the display. There are two speeds for moving the marker: fast and slow. Use of the marker to carry out the cited functions makes it possible substantially to reduce the amount of control members and to simplify and make more convenient the navigator's use of the display.

For manual locking-on of a target for automatic tracking, it is necessary to match the marker with the radar blip and to press the "lock-on" key. An 8-millimeter automatic tracking ring appears around the blip and the symbol "+" appears to the left of the ring. This indicates that the target has been taken on for tracking and that the locking-on of the next target or the completion of other operations may begin. The full procedure of locking-on to a single target lasts 3 to 4 seconds. The movement parameters are processed 1 minute after the start of tracking, and the speed vector is displayed on the scope, while the "+" symbol fades out. The vector length agrees with the movement of the target during the forecast time, T, which is selected and set up by the navigator. The time value is displayed on the left part of the scope for control purposes. The range of the possible time settings is from 1 to 30 minutes. The target movement parameters are refined over the succeeding minutes and the accuracy reaches a maximum value 2 minutes after lock-on. Under various situations, the accuracy of the processing of the movement parameters is dependent on many factors: the distance to the target, the speed of the relative approach, and so on. The most general indicator of the accuracy is the magnitude of the maximum error in processing the distance to the closest approach for dangerous targets within 2 minutes after the start of tracking. This error does not exceed 0.2 miles. In practice, it has not exceeded 0.1 miles 90 percent of the time.

The tracking ring and the vectors for dangerous targets flash on and off, which makes it possible to identify them on the display scope rapidly. An approaching target is considered to be dangerous when the distance to the closest approach and the time to the point of closest approach are less than the given values. The values are selected by the navigator on the basis of sailing conditions and are set up using special switches.

When the marker is combined with the ring for any tracked target and the "log data" key is pressed, digital data for the target are displayed on the lower part of the scope. The log data consist of the bearing and range to the target, the direction and speed of its movement (based on the lines of true or relative movement) and the distance of closest approach and the time of sailing to it. When the marker is not located on the tracking target, data only consist of the bearing and the range to the position of the marker. This allows for the rapid and automatic measurement of the bearing and range to any given navigational orientation. The course and speed of the tracking ship are reproduced continually on the right side of the scope. A

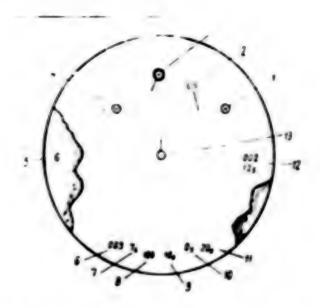


Figure 1. Display of the graphic components and digital data for secondary radar information: 1-tracking ring for a stationary target; 2- tracking ring for a moving target and vector of true movement; 3- marker for tracking ring of stationary target; 4- target accepted for tracking, but awaiting the processing of its parameters; 5- forecast time; 6- bearing of the target; 7- range of the target; 8- target course; 9- target speed; 10- distance of closest approach; 11- time to point of closest approach; 12- course and speed of the tracking ship; 13- ring of the tracking ship and vector of true movement.

special illuminated chart is situated over the scope on which parameters are displayed which characterize the operational status of the display: the scale; the image orientation (the target course or north); the reproduction regime (the lines of relative or true movement), the specified movement and forecast time values, and the magnitude of the delay time in carrying out the selected maneuver in the direction of a safe passing. The arrangement of the digital display directly on the scope, along with the use of the illuminated chart, simplifies the work of the navigator, since all of the necessary data are pinpointed in one area of the scan. It should be noted that in almost all of the similar foreign manufactured systems the digital display and the data on the mode of operation are placed away from the scope, which, of course, is less convenient for the navigator.

A method for situation extrapolation is provided to aid in the selection of a course maneuver (to starboard or port) toward a safe passing interval. The dynamic characteristics of the tracking ship and the time required for the maneuver are taken into account during the execution of the maneuver selected.

Function control and fault detection for the display are done automatically using a built-in check system to increase system reliability and maintainability. A breakdown code is displayed on a special signal indicator located over the horisontal panel. This makes it possible to identify the troublesome circuit or adapter that requires replacement.

The performance during the test phase and subsequent trial operations of the Briz-Ye automated radar display for ship collision avoidance warning has demonstrated its exceptional effectiveness in maintaining safe navigation, its simplicity and convenience of operation, and its outstanding reliability. Of particular importance, is the interference-free equipment contained in the Briz-Ye system, which is an improvement over similar foreign manufactured systems. The equipment allows the use of the display even during strong interference from sea roughness.

Construction of the new and highly efficient collision warning system amounts to a remarkable achievement for our domestic industry. The widespread installation of this equipment on maritime fleet vessels will foster a substantial increase in navigation safety.

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BONUS AWARDS TO KERCHANT FLEET PERSONNEL

Noscow MORSKOY FLOT in Russian No 9, 1979 signed to press 30 Aug 79 p 17

Interview with 1. Samokhotkin, deputy chief, Administration of Labor and Wages, Maritime Fleet, date and place not given: "Bonus System for Maritime Fleet Personnel"

Text What are the primary indicators for awarding bonuses to the crews of maritime fleet ships?

With the goals of strengthening the economic incentives for crews to fulfill and overfulfill plan tasks, to increase profits and enhance profitability, and to improve qualitative indicators, maritime personnel are given bonuses for the following:

the fulfillment or overfulfillment of trip or monthly (on the basis of completed trips) plans or tasks;

fulfillment of the graphs (schedules) for ship movements;

the fulfillment or overfulfillment of the quarterly plans for the performance of the financial operations of a ship (dredger train);

operations with a reduced crew complement in comparison with the approved standard complement and the complement norms:

fuel economies;

use of heav; fuels in place of diesel fuel (as a saving of physical assets);

the fulfillment of highly significant production tasks; successes in socialist competition.

The specific size of the bonuses is designated in the statutes on bonus awards that are approved by the managers of enterprises in cooperation with appropriate trade union committees. The awarding of bonuses for fuel conservation is done in accordance with the statutes approved by the State Committee for Labor and Wages and the All-Union Central Council of Professional Unions from funds accumulated from the fuel economies over and above the proportional norms. The bonuses are distributed in the pay of personnel who directly service the units in which the fuel is burned and those other personnel who play a part in the expenditure of fuel.

In calculating the bonuses for fulfilling and overfulfilling trip plans and tasks, are any other payments taken into consideration besides the galaries?

Yes there are. The bonuses also are computed on the basis of supplementary pay (wage rate) that is disbursed in accordance with an existing law for the holding of two jobs (positions), expansions in the area of services or increases in the volume of work, and for doing the work of a temporarily absent crew member.

The bonuses are calculated on the basis of a single salary (wage rate) for holiday and overtime work, as well as for the fulfillment by crew members of responsibilities not mentioned in the complement for workers.

In this arrangement, is the personal contribution of a crew member toward the total work performance taken into consideration during the awarding of bonuses?

The manager of an enterprise in cooperation with the trade union management may increase or decrease the size of a bonus given to an individual crew member based on his contributions to the total work performance, but by no more than 25 percent.

Management also has been given the right to deprive individual workers of bonuses completely or to reduce the size of the bonus for violations of production and technological instructions, of rules for safe navigation, and for other production omissions. The amounts of the deductions are established by the manager of the enterprise in cooperation with the appropriate trade union committee.

Individuals who have absented themselves from work without permission are deprived of the bonuses either completely or partially. Workers can be deprived of bonuses either completely

or partially when they are brought before management or criminal proceedings are instituted for hooliganism or drunkenness, as well as when measures are taken for social actions.

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TRANSPORTATION

SOUTHERN RAILROAD COLLECTIVE IMPROVES PASSENGER TRANSPORT

Moscow GUDOK in Russian 21 Aug 79 p 2

[Article by A. Sudakov, deputy chief of the railroad: "It Is an Honor To Serve the People"]

[Text] "It is an honor to serve the people" is not a placard phrase, but a principle of action for the progressive collectives of our main line, on the initiative of which an all-road competition for model service to passengers has developed. This is our first commandment, the significance of which has increased especially now, at the height of mass, summer traveling.

Thus the mood of people in transit depends entirely on how hospitable our stations and trains are, and how attentive and cordial the management is. Here we must display everything: tact, responsiveness and sympathy. One coarse word, the smallest carelessness, affects the mood of the passengers. We must not permit this!

This is not the first year we have competed for high culture in service to passengers, and we have already done something to achieve this. We have built 41 terminals, 253 buildings and 343 boarding platforms. We have placed in operation 220 automatic ticket stampers and machines, 14 automatic information centers and a number of other facilities. Central control of the sale of tickets was introduced, which was equipped with 9-channel communication. The railroad yard has been filled with new cars, DRI diesel trains and TEP60 diesel locomotives. Three more trains have been delivered for individual organizational use. High-speed diesel and electric trains h-ve been put into service on four routes. At the present time 80 percent of through-service passengers leave the Khar-kov terminal with prewritten tickets.

Today, the southerners have decided to ascend to a new level of organization in passenger transport and are conducting a complex competition in which everyone who is qualified is included: locomotive brigades and coach conductors, controllers and station personnel, yardmen and railway engineers, signalmen and power specialists, ticket cashiers, freight handlers, station and train restaurants and many, many others on whom the comfort and mood of the person in transit depends. We have taken on extensive joint obligations. Here, everything is of importance; nothing is insignificant. Take, for example, a train movement chart. What would happen to everything else if this were not observed? Therefore, the train controllers have given their word to insure passenger trains a green light in all directions, and locomotive brigades will try to introduce every train running behind schedule into the chart or minimize the delay.

Workers at technical maintenance points for cars will insure constant highquality preparation of the [rolling] stock in a run that has been issued a guaranteed clearance. This summer railway engineers will increase the speed of train travel to 112 kilometers.

They have also set a course to continue perfection of passenger services in terminals and on trains. Here we have increased the advance sale of tickets for reserved seats, both to and from the destination, by two percent over last year.

Serious attention has been given to strengthening the material-technical base of the passenger service. We have constructed 11 buildings and 12 boarding platforms and continue the construction and reconstruction of stations.

We do not doubt the feasibility of these plans. The leading collectives prove this by personal example. For example, the engineers of the Khar'kov Oktyabr' Depot systematically reduce the delay of passenger trains entering the road and, using the work experience of the best brigades, save of electric energy. In the space of seven months they surpassed their yearly obligation by a large margin. With the electrical energy which was conserved it would be possible to run 100 trains between Khar'kov and Kursk. One hundred trips for free! The best results were produced by the brigade under engineer N. S. Tutov.

Or take the komsomol young people's shift under the chief route controller P. V. Gladchenko, which invariably insures that each passenger and local train keeps on schedule. Here, everyone, Pavel Vasil'yevich himself, route controllers S. I. Mishenin and A. S. Sheverdina, engineer L. S. Vasilenko, work creatively; they find better, rational control variants. The collective occupies first place among road shifts in the South.

Descrying of attention are the undertakings of the railway men of Lozovskaya's division who have fulfilled the annual plan for capital repair of the track one-half year ahead of schedule--before the beginning of the high-volume summer haulage. Changes in the technical service terminal at the Kharkov passenger station insure that each train is kept on schedule.

Train conductors are on par with well-known collectives such as the brigade under the chief V. P. Tkachenko on the firm's Khar'kov to Moscow run, which always guarantees service.

A complex technology for the conveyance process which operates on an innovative model designed by the foremost people was approved in the beginning of the year at a technical-economic council. This model was instrumental to a decisive degree in the Southern line being awarded the challenge Red Banner by the ministry and trade-union central committee.

However, it must be noted with sorrow that even today on the road to a great beginning, we are often faced with so-called objective conditions. They often occur through no fault of the southerners and we must reap the bitter fruits. Judge for yourself: There is not one day that goes by that all trains heading east have arrived here without a delay. And they are delayed not by minutes or hours but by whole days—that and even more. What can be done here? Not being able to wait for our Vladivostock train, for example, we were forced to activate supplementary rolling stock to Vladivostock, but even this did not save us.

Along the routes of the passenger flow "bottlenecks" have built up. Along routes such as the Khar-kov to Poltava and Khar'kov to Izyum, for example, trains travel at a snail's pace; this is a warning sign. It cannot be said that our railway engineers are not at fault in this matter. They are, and to a large extent. They still do not do everything necessary for the normal maintenance of track guage. This we understand. However, there are extreme limits on the exploitation of the track along the route. There, where capital repairs have been needed for a long time, one cannot have model maintenance.

Year in and year out the roadway does not receive many rails, switches, switching timber and ties from industry. In 7 months, half as much switching timber was received in July, only one-third the amount planned. And thus, at present, three track machinery stations have practically ceased work on capital repairs of important routes.

It is clear that with such skimpiness in maintenance, it will be difficult for us to overcome the traveling "buts" without an adverse effect on travel.

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TRANSPORTATION

BRIEFS

PUBLIC TRANSPORT--PRAVDA [sic] carries a brief report on the duty of every Soviet citizen to save energy. Two "public nuisances" cited from the city of Novgorod: (1) During rush hours people have to wait upwards of an hour for buses. During the last frigid winter only 60 of the 300 buses were operating. A bus garage planned for 10 years is still unfinished. (2) The 354 buses serve exclusively as uncompensated conveyance for employees of the concern, e.g. one often sees a single individual riding in a bus as if it were a taxi. Employees use buses to go to picnics, fishing trips or mushroom-gathering excursions. [Bonn DIE WIRTSCHAFT DES OSTBLOCKS in German 14 Jul 79 p 5]

NEW TANKER--The building data for a "tanker of a new type" with an estimated useful life of 25 to 30 years has been completed at the Soviet "Baltsudo-proyekt" Institute in Leningrad. It has a planned standard 242.3 m length, 32.2 m width and carrying capacity of 68,000 dwt; it is powered by an 18,500 hp diesel engine and can attain a speed of 16 knots. Gross tonnage is given as 84,600 gross registered tons. [Text] [Bonn DIE WIRTSCHAFT DES OSTBLOCKS in German 5 Oct 79 p 5]

BAM CONSTRUCTION WORKERS--The BAM builders flock to Siberia because of the "fast buck". [Article quotes LITERATURNAYA GAZETA to the effect that every years every third BAN workers returns to the European USSR from his Siberian place of work. The state must spend R15-20,000 for a new settlement which experience show will be chronically underutilized. Many young people only come to Siberia for the "fast buck" and leave when they have their money. Therefore it is pointless to upgrade the level of housing, and the Soviets can only forgive the refusal of workers to stay and try to cover things up.] [Bonn DIE WIRTSCHAPT DES OSTBLOCKS in German 16 Aug 79 p 5]

ELECTRIC POWERPLANT SHIP--On the West Siberian river shippard in Tyumen a new variant of electric powerplant ship of the "Severnoye Siyaniye" type is currently being built. In addition to liquid fuel, this vessel will be able to operate on a natural gas basis. The new model, whose construction will take 1-1/2 years, will be equipped with 2 gas turbine installations with individual capacities of 12,000 kW each. The first ship of the Aurora Borealis [Severnoye Siyaniye] series was built 10 years ago in the city of Gorkiy, after

which series production was shifted to Siberian river shipyards. The "floating powerplants" will have unlimited use on rivers of the area and serve as power sources for local industrial projects and work settlements in remote tundra and taiga areas. [Bonn DIE WIRTCSCHAFT DES OSTBLOCKS in German 31 Aug 79 p 10]

VANINO FERRY TERMINAL--In connection with the construction of the Baykal-Amur Main Railroad and the decision of the Ministry of Maritime Fleet to increase the number of ferries to 11 it is essential to begin construction of a second ferry mooring in Vanino Port. Presently the (?Kasp)morniiproekt Institute which designed the first stage of the ferry crossing, has completed technical and economic documents for construction of the second stage and working drawings have already been issued for work to be carried out in 1980. The first project will be construction of a ferry pier in which more progressive methods will be used applying one-span bridge structures 42 meters in length. [Khabarovsk Domestic Service in Russian 0930 GMT 13 Oct 79]

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